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HORTICULTURAL RESEARCH INSTITUTE OF ONTARIO

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MUCK VEGETABLE
CULTIVAR TRIALS
and
RESEARCH REPORTS

1985

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Ministry of
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Muck Research Station
Kettleby, Ontario

RESEARCH AND CULTIVAR TRIAL REPORT FOR 1985

MUCK RESEARCH STATION, HOLLAND MARSH,

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SEED SOURCES - 1985

We wish to express our sincere thanks to all those who provided us with seed for trials.

A.A. All America Selections, 628 Executive Dr., Willow Brook, IL. 60521, U.S.A.
A&C Abbott & Cobb Inc., Box 307, Feasterville, Pa., U.S.A. 19047
A.Ch. Alf. Christianson Seed Co., Box 98, Mount Vernon, Washington, U.S.A. 98273
Agri Agri-Seed & Chemical Corp., 850 Dryden Road, Metamora, Mi. U.S.A. 48455
ARCO Arco Seed Co., Box 181, El Centro, California, U.S.A. 92244-0181
Asg Asgrow Seed Co., Box 610, Bradford, Ontario, Canada, L3Z 2B2
Asm Asmer Seeds Ltd., Ash St., St. Leicester, England, LE5 0DD
BEJO Beemsterboer & Jacob Jong seed Co. Ltd., Box 9 Noordscharwoude, Holland
Bur W.A. Burpee Co., Warminster, Pa., U.S.A., 18974
Cro Crookham Company, Box 520, Caldwell, Idaho, U.S.A. 83605
E.J. Erie James Produce, P.O. Box 457, Leamington, Ontario, Canada N8H 3W5
FM Ferry-Morse Seed Co., 111 Ferry Morse Way, P.O. Box 7274, Mountainview, California, U.S.A. 94942.
Gold Goldsmith Seeds Inc., Box 1349, Gilroy, California, U.S.A. 95020
HM Harris Moran Seeds of Canada, R.R. # 2 Hamilton, Ontario Canada L8N 2Z7
JHK J.H. Klitgord, Box 87, Mayville, New York, U.S.A. 14757
Jung J.W. Jung Seed Co., Randolph, Wisconsin, U.S.A. 53956
K.Br. Kees Broersen, Bogtmanweg 7, 1747 HV Tuitjenhorn, Holland
Kru Krummrey & Sons Inc., Stockbridge, Michigan, U.S.A. 49285
MSU Michigan State University, Dept. of Horticulture, East Lansing, Michigan U.S.A. 48824
NK Northrup King & Co., 1500 Jackson St., N.E. Minneapolis, Minn, U.S.A. 55413
NZ Nickerson-Zwaan BV., Gebroken Meeldyk 74, Box 19 2900A Barendrecht, Holland
PES Peter Edward Seed Co., 115 Cardinal Lane, Eustris, Florida, U.S.A. 32726
PETO Petoseed Co., Inc., Box 4206, Saticoy, California, U.S.A. 93004
RD Reed's Seeds. R.R. # 2 Corland, New York, U.S.A. 130545, U.S.A.

RS Royal Sluis Inc., 1293 Harkins Rd., Salinas, California, U.S.A. 93901
Royal Sluis Inc., Box 22 1600AA, Enkhuizen, The Netherlands

SG Sluis en Groot, Box 13 Enkhuizen, The Netherlands and/or Sluis en Groot
of America Inc., 124 Griffen St., Salinas, California, U.S.A. 93901-3786

Sha Charles Sharpe & Co.Ltd., Seaford Lincs, England, NG3 47HA

SS Seed Service Inc., See: J.W. Jung Seed

Sto Stokes Seeds Ltd., 39 James St., P.O. Box 10, St. Catharines, Ontario L2R
6R6.

Sun Sun Seeds, 9531 West 78th St., Suite 229, Eden Prairie, Minn., U.S.A.
55344

Swy Seedway Inc., Hal, New York, U.S.A. 14463

Tak Takii Co. Ltd., Box 7, Kyoto Central 180 Umbekosi-Inokuma, Kyotoa,
Japan 600-91

Toz A.L. Tozer Ltd., Cobham Survey, England KT11-3EH

Tra Trapp & Sons, Beulak, Michigan, U.S.A.

USDA U.S. Department of Agriculture, Dr. C.E. Peterson, Dept. of Hort.
University of Wisconsin, Madison, Wisconsin, U.S.A. 53706

UW University of Wisconsin, Dept. of Hort. 1575 Linden Drive, Madison,
Wisconsin, U.S.A. 53706, Attention Dr. Gableman

VDH Vandershave, Box 1, 4420AA, Kapelle 3648, Holland

FUNGICIDE TREATMENTS FOR THE CONTROL OF CAVITY SPOT AND HORIZONTAL LESIONS IN CARROTS, 1985

The cultivars Chanton, and Tahoe, which are susceptible to cavity spot or Horizontal lesions, were seeded on June 7 in an organic soil at 50 seeds/m

Treatments:

1. Check, no treatment
2. Seed treatment with metalaxyl (Apron 35 SD at 1 g/100 g of seed).
3. Furrow treatment with granular metalaxyl at 1 kg ai/ha (Ridomil 5 G at 20 kg/ha).
4. Drench treatment with a mixture of metalaxyl at 0.2 kg ai/ha plus mancozeb at 1.6 kg ai/ha (Ridomil MZ 72 WP at 2 1/2 kg/ha) in a 6 cm wide band over the row in 1000 l water/ha. applied immediately after seeding.
5. A spray with a mixture of metalaxyl at 1.2 kg ai/ha plus mancozeb at 9.6 kg ai/ha (Ridomil MZ 72 WP at 15 kg/ha) in a 1000 l water/ha. The application was made one month after seeding.

These 5 treatments were also applied in all possible combinations.

All treatments and combinations of treatments replicated 3 times.

Treatments	% & Degree Horizontal lesions	Treatments	% & Degree Horizontal lesions
Check no treatment	74M	Spray treatment only	46VI.
Seed Treatment only	58L	Spray + Seed	48VI.
Furrow treatment only	26VI.	Spray + Furrow	33VI.
Furrow and Seed	32VI.	Spray + Furrow + Seed	25VI.
Drench treatment only	40VI.	Spray + Drench	24VI.
Drench + Seed	37VI.	Spray + Drench + Seed	26VI.
Drench + Furrow	35VI.	Spray + Furrow + Drench	20VI.
Drench + Furrow + Seed	23VI.	Spray + Furrow + Drench + Seed	25VI.

Results: 74% of the roots in the check plots developed cavity spot and horizontal lesions of large sizes and high numbers that made almost all of them unmarketable.

58% of the carrots in the seed treatments plots developed some horizontal lesions and very few cavity spots. Almost all roots were marketable.

In all other treatments and combinations of treatments only very minute horizontal lesions were found.

Conclusion: From the preliminary report, it appears that metalaxyl alone or mixed with mancozeb significantly reduces the incidences of cavity spot and/or horizontal lesions in

TRANSPLANTED CAULIFLOWER HERBICIDE TRIAL ON MUCK SOIL, 1985

The cultivar Snowcrown was seeded on June 4 in speedling trays and transplanted to the field on July 10. The plot size was 4.2 X 3.2 m, the rows at 80 cm, the plants at 60 cm in the row and treatments were replicated three times. The pre-planted herbicides were applied on June 9, the post transplanted treatments on August 8. The tractor mounted boomsprayer applied 55 l. water/ha at 140 k.Pa. Assessment date was Aug. 19. and the harvest took place from Sept. 6 to 23.

Treatments	Rate/ha	% Weed control	% Crop Injury	wt (g) /head	t/ha	Colour	Quality
Metolachlor DUAL	0.96 ai 1 l.	pre 4	6	1109	23	4.04	4.27
Oxyfluorfen GOAL	0.12 ai 625 ml	pre 37	11	1151	24	3.97	4.25
Propachlor RAMROD	7.68 ai 16 l.	pre 82	22	1251	26	4.14	4.30
Oxyfluorfen GOAL	0.06 ai 312 ml	post 75	65	940	19	3.88	3.99
Oxyfluorfen GOAL	0.03 ai 156 ml	post 65	50	1130	23	4.04	4.41
Oxyfluorfen GOAL	0.015 ai 78 ml	post 31	39	1035	22	3.90	4.27
Non weeded Check		0	0	861	18	4.00	4.13

Not many grasses were present, but broadleaf weed pressure was high, Propachlor gave excellent weed control, low crop injury, resulting in good yields of high quality. Oxyfluorfen pre gave some weed control and good yields. All oxyfluorfen post treatments resulted in much crop injury, although the yields were not always severely reduced.

Post transplanted treatments, applied at an earlier date, should be tried in subsequent experiments.

WEED CONTROL IN ONIONS WITH OXYFLUORFEN AND PROPACHLOR - 1985

The cultivar Aries was seeded April 30, 1985 in rows 43 cm apart. One row of barley Bruce was added to each plot. The plot size was 8 rows of onions 5 m long. The treatments were replicated three times. The tractor mounted boomsprayer applied 550 l. water per ha at a pressure of 140 kPa (20 p.s.i) except sethoxydim, which was applied at 300 l./ha and 280 kPa.

Herbicides applied to all treatments:

- May 8, pre-emergence: paraquat 0.5 kg/ha ai
(Gramoxone 2 1/2 kg/ha)
- June 10, barley eradication: sethoxydim 0.35 kg/ha ai
(Poast 1.9) l./ha) + Assist 2 l./ha
- July 3, grass control: fluazifop-butyl 0.25 kg/ha ai
(Fusilade 1 l./ha) + Agral 90 0.5 l./ha

Herbicides applied, except to check plots.

- May 14, Loopstage: allidochlor 6.7 kg/ha ai
(Randox 14 l./ha) tank mixed
with chlorpropham 2.85 kg/ha ai
(CIPC 6l./ha)

Post emergence treatments information:

Date	a.m. or p.m.	Climatic conditions	# of true leaves
June 05	p.m.	cloudy	1
June 11	a.m.	cool, humid, overcast	2
June 20	p.m.	dry, sunny	3
June 27	a.m.	sunny	4
July 04	a.m.	dew on leaves	5
July 09	a.m.	dry	6
July 17	p.m.	sunny	7+
July 24	a.m.	slight dew on leaves	8+
Aug. 03	p.m.	sunny, clear	10
Aug. 13	—	sunny	10+

WEED CONTROL IN ONIONS WITH OXYFLUORFEN AND PROPACHLOR - 1985 - continued

POST EMERGENCE TREATMENTS

Treatments	Rate kg/ha ai	Applied at True leave #	Climatic Conditions	% Crop Damage One Week After Application	Aug 22	% Grass Control	% BLM Control	BLM Weeding Yield \$/ha	Yield t/ha
Oxyfluorfen	0.12	1,3,6,8,10	any	25	15	73	82	44	70
Oxyfluorfen	0.06	1,3,6,8,10	any	22	5	61	75	86	76
Oxyfluorfen	0.06	1,3,6,8,10	clear p.m.	13	7	54	84	39	69
Oxyfluorfen	0.03	1,3,6,8,10	any	14	5	47	77	297	73
Oxyfluorfen + Insecticide + Fungicide at 760 kPa	0.015	3,4,6,7,8,10 + Aug 8, 13	any	31	7	70	57	454	69
Oxyfluorfen	0.12	2	cool, humid	35					
Oxyfluorfen + Propachlor	0.04 + 2.4	4,7,9	a.m. no dew	11	8	73	96	51	72
Oxyfluorfen	0.06	2	cool, humid	32					
Oxyfluorfen + Propachlor	0.027 + 2.4	4,7,9	a.m. no dew	8	3	57	76	125	77
Oxyfluorfen	0.03	2	cool, humid	15					
Oxyfluorfen + Propachlor	0.013 + 2.4	4,7,9	a.m., no dew	6	5	63	74	491	76
Weeded Check	-	-	-	-	-	53	0	10,416	42
Check	-	-	overrun with weeds, rop destroyed.						

Oxyfluorfen 0.12 kg/ha ai = Goal 625 ml/ha (9 fluid ounces/acre)

Propachlor 2.4 kg/ha ai = Ramrod 5 l/ha (1.8 quarts/acre)

+ = tank mixed

BLM = broadleaf weeds

70 t/ha = 1250 bags/acre

* The average of judging done June 22, July 4, and September 5.

RESULTS

1. Tank mixing oxyfluorfen with pesticides and using a pressure of 760 kPa (110 p.s.i.) resulted in severe injury.
2. Crop injury was more severe at the 0.6 and 0.12 kg/ha ai rate of oxyfluorfen.
3. Increased crop injury occurred when oxyfluorfen was applied under cloudy or humid weather conditions, and when the leaves were wet with dew.
4. Applications made at the 1st true leaf stage resulted also in injury
5. There appeared to be little or no damage done to the crop when oxyfluorfen and propachlor were tank mixed.

YIELD

All treatments produced above average yields. The yield of the weeded check was only 58% of the average of the treated plots, due to weed competition between hand weedings and as a result of damage done by handweeding.

WEED CONTROL

From this trial, it appears that the best weed control and lowest weeding costs were obtained with oxyfluorfen at 0.6 and 0.3 kg/ha ai when applied on clear, dry days and with oxyfluorfen at 0.4 kg/ha ai tank mixed with propachlor at 2.4 kg/ha ai.

CORRECTION:

Results

2. 0.6 should read 0.06

Weed Control

0.6, 0.3, 0.4 should read 0.06, 0.03, and 0.04

PHOSPHATE RATE STUDY ON ONIONS GROWN ON MUCK SOILS, 1985

The cultivar Aries was seeded in a field that required 80 kg/ha P_2O_5 . Nitrogen, potash, and copper sulfate were applied as required by soil test, while phosphate was applied at 0, 40, 80, and 120 kg/ha P_2O_5 .

The trial was replicated 4 times and data was taken of date of maturity (85% tops down) and yield.

Results:

kg/ha P_2O_5	Yield t/ha	Date of Maturity
0	74.9	Sept. 5
40	75.1	Sept. 3
80	80.3	Sept. 2
120	82.8	Aug. 31

Conclusion:

Although all during the growing season the difference between treatments were not visible to the naked eye, both the dates of maturity and yields indicate positive results of the treatments.

TRANSPLANTED ONION TRIAL - 1985

The early maturing cultivars Norstar and Pronto S were seeded on February 25, March 11, and March 25, in black plastic square plant modules 3 cm X 3 cm X 7 cm deep at 200 modules per planter flat. The seeding rate was 4,6, and 8 seeds per module, which at transplanting time was reduced to 3,5, and 7 plants per module. The plants were regularly trimmed back to a height of 10 to 12 cm. On May 15 the modules were transplanted to the field at a spacing of 12.5 cm in the row and a row spacing of 43 cm. Prior to planting chlorofeninfos (Birlane) 5 G was drilled into the plant furrows at 23 kg/ha and after planting another 5 kg/ha was spread in a 10 cm wide band over the row and lightly covered with soil. Crop management was the same as for direct seeded onions.

Results

Seeding Dates	Tops Down	Yield		Weight/ Bulb (g)	Stand/ Meter
		t/ha	b/a		
February 25	August 09	65	1156	101	28
March 11	August 11	66	1165	104	27
March 25	August 09	72	1279	113	27
Modules					
3 plants/module - 20/m	August 12	60	1072	142	18
5 plants/module - 36/m	August 10	63	1122	107	25
7 plants/module - 52/m	August 08	79	1406	88	38
Cultivars					
Norstar	August 9	70	1250	115	26
Pronto S	August 10	65	1151	98	28

Conclusion

The onions seeded on March 24 produced a higher yield than those that were seeded earlier. There was no significant difference in maturity dates.

The onions seeded at the highest rate, and thinned to 7 plants per module produced the highest yield and matured 2 to 4 days earlier than those with 3 or 5 plants per module. Bulbs were smaller (88 g/bulb) in the 7 plants per module compared to the bulbs in the 3 or 5 plants per module (142 g and 107 g/bulb respectively).

The cultivar Norstar produced a higher yield of larger sized bulbs at a slightly earlier maturity date than the cultivar Pronto S.

NOTE: In 1985 trials the date of maturity of the direct seeded cv Norstar varied from August 14 to August 31, depending on plantstand and location.

BROCCOLI CULTIVAR MAIN TRIAL. - 1985

Cultivar	Source	PEAK HARVEST		% Stand	% Marketable	Mcb. t/ha	Wt/head (g)	Bead Size	Exterior Colour	Uniformity	Shape of Head	Breakdown	Open Florets	Yellow Eye	Loose	Head Position	Branch Length	% Hollow Stem	Reason Unmarketable
		Week	% Cut																
Premium Crop	Tak	A.21	74	91	95	28	553	4.5	4.6	4.4	4.5	4.6	4.6	4.8	4.4	2.9	3.1	13	Bd, Br, Bs
Emperior	NK	A.17	71	97	97	23	429	3.8	3.8	3.9	3.9	3.8	4.6	3.5	3.8	3.0	2.6	25	Bd
Prominence	IM	A.17	66	89	89	21	456	3.5	3.8	3.5	3.4	3.9	4.3	4.1	3.1	3.0	2.9	85	Bd, S, Bs
Futura	Asg	A.21	63	91	95	21	387	3.9	3.4	3.8	3.9	4.5	4.6	4.0	3.9	3.2	3.5	82	Bd, Bl, Bs
Topstar	Gold	A.19	69	93	100	21	379	4.4	4.4	3.8	4.3	5.0	4.4	4.2	4.4	3.6	2.6	26	---
Southern Comet	Tak	A.21	38	93	92	18	362	4.5	3.9	4.0	4.2	4.6	4.8	4.4	3.9	2.9	3.0	32	Bd, S, U
Paragon	Sto	A.18	52	88	96	18	356	4.0	4.1	3.7	3.7	4.9	4.7	4.0	3.8	3.5	3.6	84	Bd
Mercedes	Gold	A.13	70	82	82	18	445	3.6	3.7	3.3	3.0	4.9	4.9	4.0	3.4	3.4	4.1	57	S, Bd, L
Galaxy	Asg	A.12	74	91	95	17	336	3.7	3.9	4.2	4.3	4.7	4.7	4.1	4.5	3.0	3.1	31	O, L
Bonanza	Bur	A.17	55	87	94	15	315	4.1	4.3	4.1	4.3	4.9	4.4	4.2	4.3	3.1	3.0	53	Bd, S, L
Green Comet	Tak	A.14	50	93	96	13	256	4.1	4.4	3.9	4.2	4.9	3.4	4.4	4.4	2.4	2.3	37	L, Bd, S
Green Goliath	Bur	A.17	59	100	98	13	232	3.8	3.9	3.7	3.9	4.8	3.0	4.1	4.2	2.6	2.3	38	O

Reasons Unmarketable

Bd = Breakdown
 Br = Eracted
 L = Loose
 Y = Yellow Eye
 O = Open Florets
 S = Shape
 U = Uniformity
 C = Colour

5 = Most Desirable

Listed in order of marketable t/ha

BROCCOLI CULTIVAR ADAPTATION TRIAL - 1985

Cultivar	Source	Peak Harvest		% Stand	% Marketable	Mkb. t/ha	Wt/head (g)	Bead Size	Exterior Colour	Uniformity	Shape of Head	Breakdown	Open Florets	Yellow Eye	Loose	Head Position	Branch Length	% Hollow Stem	Reason Unmarketable
		Week	% Cut																
PSR 21784	PETO	A.24	43	93	86	23	502	4.3	3.8	3.9	4.0	4.0	4.4	4.1	3.8	2.3	2.3	88	Bd, L, S
Premium Crop	PETO	A.22	58	100	87	22	420	4.6	4.4	4.1	4.4	3.6	4.4	4.7	4.4	2.9	2.3	15	Bd, S, Bs
Packman	RD	A.14	79	93	96	20	387	4.0	4.2	4.3	4.6	4.7	4.9	4.5	4.4	3.0	2.7	22	Bd, L, Bs
Neptune	RS	A.23	80	83	96	20	428	4.3	4.5	4.3	4.5	4.2	4.2	4.6	4.4	3.1	3.4	88	S, U, L
79-58	Gold	A.14	68	83	72	20	582	3.7	4.2	4.1	3.7	4.4	4.6	4.2	3.7	3.4	4.1	72	Bd, Bs, L
Shogun	NK	S.15	42	80	66	20	628	2.8	3.6	3.3	3.5	4.8	4.6	3.6	3.5	3.1	2.3	13	Bs, U, S, B, D
Citation	HM	A.22	56	83	92	19	435	4.1	4.0	4.1	4.3	5.0	4.3	4.7	4.0	2.9	2.4	57	Bd, S
Excalibur	HM	A.28	58	87	96	18	373	4.0	4.1	3.9	4.2	4.7	4.5	4.2	4.4	3.1	2.0	40	Bd
XPH 5004	Asg	A.17	53	80	100	17	373	4.3	4.4	4.8	4.9	5.0	4.5	3.5	4.9	3.0	2.3	67	---
Goliath	Sto	A.12	74	80	100	17	362	4.1	4.3	4.4	4.5	5.0	4.8	4.3	4.7	2.9	2.1	29	---
Packman	PETO	A.14	65	87	92	16	349	3.8	4.0	4.3	4.5	4.9	4.7	4.0	4.5	3.1	1.9	50	B d, L
Skiff	RS	A.25	65	100	74	16	352	4.3	4.7	4.0	4.4	3.6	4.1	4.3	4.5	3.0	2.7	22	Bd
XPH 5003	Asg	A.12	75	93	100	16	288	3.8	4.2	3.9	4.2	4.3	3.7	4.0	3.6	3.1	2.8	7	---
XPH 5167	Asg	A.08	81	87	100	16	320	3.5	3.5	3.6	3.9	4.7	3.9	3.9	4.5	3.4	3.7	65	---
Cruiser	RS	A.19	68	93	89	15	316	4.7	4.6	4.2	4.4	4.8	4.2	4.9	4.5	3.6	3.1	4	Bd, Bs
PSR 21684	PETO	A.31	65	100	36	12	555	3.5	3.8	3.6	3.6	3.7	4.8	4.0	3.7	2.1	1.8	91	Bd, Bs, S

The Main Trial, replicated 3 times, and the Adaptation Trial, not replicated, were direct seeded on June 3, in rows 6 m long and 86 cm apart. The plants were thinned to 20 cm in the rows.

The % cut at peak harvest is calculated on the basis of the largest number of heads harvested in one week.

All judging marks run from 5.0 to 1.0 with 5.0 being the most desirable. Marks below 4 indicate one or more deficiencies in quality or requirements.

CABBAGE CULTIVAR STORAGE TRIAL AND ADAPTATION TRIAL.

The cabbage cultivars were grown in organic soil and placed in two types of storages. One was a "Filacell" type storage where the temperature was controlled at 1.70°C and the relative humidity held constant, above 95%. The other was a refrigerated storage controlled at 0°C while the relative humidity varied from 85 to 100%. The trial was replicated 4 times. The storage periods were 70 and 154 days.

In a similar non-replicated Adaptation Trial, 13 cultivars were placed in the refrigerated storage and evaluated after 117 days.

The cabbage in the "Filacell" storage needed slightly less trimming and had a slightly better colour. The recovery was 80% for the refrigerated storage and 85% for the "Filacell" storage.

The cultivars are listed in order of % marketable.

REASONS UNMARKETABLE

Listed in order of severity:

S = Split
Y = Yellow
W = Wilt
B = Black Specking
R = Rot

* 5 = Most Desirable

... / continued

CABBAGE CULTIVAR STORAGE TRIAL - 1984-85 - continued

Main Trial	Source	% Mkb.		Loss After 154 Days		Colour*	
		70	154	%	Reason	Before	After
		Days	Days	Shrink	Unmark.	Trim	Trim
Bartolo	BEJO	97	92.0	4.3	3.7	4.6	4.5
Polinius F1	BEJO	96	90.5	5.1	4.4	4.8	4.6
April Green	BEJO	92	90.2	4.6	5.2	4.8	4.6
Deen 522	Sto	95	88.8	3.8	7.4	4.4	4.2
Superdane YR	FM	90	88.0	5.0	7.0	3.7	3.3
Deen 523	K.Br.	95	87.8	7.5	4.7	4.8	4.3
Evergreen Ballhead	Sto	94	86.5	6.9	6.6	4.2	4.0
Hinova	Sto	94	86.0	5.0	9.0	3.5	3.1
Starski	K.Br.	95	81.7	4.7	13.7	4.2	4.1
Winterkeeper	RD	90	66.7	5.2	28.1	2.7	2.0
Danish Ballhead	K.Br.	71	44.9	5.2	49.9	1.9	.9
Blue Pak	Swy	82	0.0	---	100.0	-	-

CABBAGE ADAPTATION TRIAL - 117 DAYS IN STORAGE

Solid Blue	A&C	84	5	11	BRY	2.9	1.7
Safe Keeper	Sto	82	5	13	BYW	4.7	2.6
Sure Pak YR	RD	81	4	15	SYW	3.4	2.6
Supergreen	RD	80	5	15	WBRY	4.7	3.3
Titanic 90	FM	74	5	21	RBYS	2.6	1.6
HYB 53-2376	Tak	69	6	25	RY	2.0	1.0
Blue Boy	A&C	68	18	14	BRY	3.3	1.9
Enterprise	Asg	62	5	33	BR	2.6	1.0
Superboy YR	RD	58	5	37	RBV	2.2	1.1
Rio Verde	HM	58	5	37	SBYR	2.7	1.4
Prime Time	FM	57	6	37	BRY	2.9	1.0
Penn State Ballhead	Sun	57	10	33	YR	2.7	1.2
Hybrid N	HM	50	6	44	RBV	2.4	1.4

CARROT CULTIVAR MAIN TRIAL. - 1985 - PACKAGING TYPES

Management Procedure:

Fertilizer was applied as per soil sample recommendations at 700 kg/ha 7-7-25 + 10 kg/ha Borax and the soil was rotovated to a depth of 25 cm.

The trials were seeded on May 17 in rows 50 cm apart with a V belt seeder equipped with a 5 cm scatter shoe, at 82 seeds/m. The Main Trial was replicated three times.

A tornado passed through the area on May 31 at 5:10 p.m., just north of the Research Station, destroying many buildings. An accompanying severe thunderstorm dumped 19.4 mm of rain on the Research Station in the span of a few minutes, causing heavy flooding and resulting in a loss of plantstand and compacted soil, which in turn resulted in a heavier than normal cull-out for many cultivars and shorter roots.

A regular fungicide spray program was discontinued after September 1st to evaluate the cultivars for tolerance to leafblights. Harvest took place on October 4th and 8th when data was taken for the presence of Rusty Root and leafblights in the Main and Adaptation Trials, and also for horizontal lesions and cavity spot in the Observation Trial.

Legend:

Yield: 56 t/ha = 1000 bushels/a

Length and Width: 20 cm = 8 inches

Quality marks: 5 = most desirable

Rusty Root: More rusty root was observed than in any of the previous 10 years, resulting in a loss of smoothness for some cultivars

Horizontal Lesions: The % of roots that have horizontal lesions and/or cavity spots and to what degree these are present on the roots. 55VL means that 55% of the roots have very few and very small lesions. L = lightly affected, a few and small lesions, M = medium, H = many and large cavity spots, roots unmarketable.

This year the roots were much more affected by this disorder than in other years, which could have been caused by the high fertilizer application and the severe rain storm on May 31st.

Slicer Types: The degree to which the shape of the roots makes it suitable for slicers.

Score: The average of the marks given for uniformity, appearance, resistance to greening, colour and core size.

The Main Trial is listed in order of length of the roots.

CARROT CULTIVAR MAIN TRIAL - 1985 - PACKAGING TYPES

Cultivar	Source	Yield Marketable		% Oversize	% Marketable	Roots		Uniform		Resistance to Greening	Colour		Core Size	Rusty Root	% Horizontal Les & Degree	Blight	Slicer	Score
		t/ha	b/a			Length (cm)	Width (cm)	Shape	Size		Appearance	Internal						
Orlando Gold	Sto	67	1199	18	85	23	3.4	4.3	4.3	4.7	4.6	4.3	4.1	4.7	54VI	4.0	2.9	4.38
Candy Pak	Cro	72	1281	37	90	22	3.4	4.2	4.0	4.0	4.2	4.3	4.2	5.0	50I	3.3	2.7	4.17
Harvestmore	Cro	69	1222	35	82	22	3.5	3.8	4.0	3.6	4.0	4.2	3.9	4.3	55I	4.0	2.8	3.86
Six Pak	HM	70	1253	24	81	21	3.6	4.2	4.6	4.3	4.1	4.3	4.2	4.7	50VI	4.0	3.1	4.15
Vitasweet 721	A&C	64	1140	20	78	21	3.4	3.9	3.8	3.7	4.7	4.7	3.9	4.3	55I	2.7	2.7	4.18
Aristopak	Cro	72	1283	38	85	21	3.5	3.9	3.9	3.7	4.0	3.9	4.0	4.0	80I	3.7	2.7	3.90
Caropak 569	Asg	62	1098	23	79	21	3.4	4.0	3.7	3.5	3.6	4.1	3.9	4.7	53I	4.0	2.8	3.71
Golden State	A.Ch.	56	1001	23	77	21	3.3	4.0	3.9	4.6	4.6	4.4	4.2	4.3	57M	3.0	2.8	4.19
Dagger 78	ARCO	66	1168	15	78	21	3.2	4.3	3.7	4.1	4.6	4.6	4.2	4.0	80I	3.7	3.0	4.21
Paramount	Asg	69	1231	30	76	21	3.5	4.0	4.0	3.6	3.9	3.8	3.7	4.7	57I	4.0	3.0	3.72
Cimarron	HM	65	1153	29	85	21	3.5	4.2	4.3	4.1	3.9	4.2	3.6	5.0	63VI	4.0	2.7	4.01
Britepak	A&C	74	1309	35	88	20	3.7	3.6	3.9	3.3	3.9	4.0	3.7	4.7	70I	4.3	2.5	3.79
Chancellor	Asg	69	1224	28	79	20	3.3	3.8	3.8	3.7	4.0	4.3	4.0	4.7	63I	2.7	2.8	3.91
Diplomat	Asg	74	1321	31	85	20	3.4	3.9	3.7	3.6	3.9	4.1	3.9	4.3	74M	3.7	2.8	3.82
Dart	ARCO	67	1196	23	74	20	3.5	3.8	3.9	3.6	4.5	4.1	4.0	3.7	50M	4.3	3.0	3.81
Six Pak II	HM	68	1217	24	86	20	3.5	3.8	3.9	3.9	4.1	4.2	3.8	5.0	47VI	4.0	2.6	3.99
Flavorpak	Cro	72	1288	37	88	20	3.4	3.8	3.5	3.6	4.1	4.2	3.9	4.0	44I	4.0	2.7	3.89
Sweet'N Crisp	Cro	63	1121	47	81	19	3.6	4.0	4.0	3.6	3.6	3.9	3.8	4.7	60I	4.0	2.7	3.87
Cellobunch	Asg	71	1263	29	79	19	3.4	4.1	4.1	3.8	4.5	4.3	4.0	4.7	35I	4.0	3.4	4.00
A Plus	A.Ch.	47	833	17	59	19	3.5	4.0	3.8	4.7	4.5	4.3	4.1	3.3	69M	4.0	2.9	4.12
Packer '83	Cro	56	998	30	76	19	3.6	3.6	3.7	4.1	3.6	4.2	3.7	3.7	65M	4.7	2.9	3.76
Goldmine	Sun	65	1155	23	83	19	3.5	3.9	3.8	3.8	3.7	3.7	3.6	3.3	57I	4.3	2.8	3.74
Orange Sherbet	Sto	62	1111	37	72	19	3.6	3.6	3.4	3.4	3.9	3.9	3.7	4.3	58M	3.3	2.7	3.58
Vitasweet 750	A&C	73	1299	17	80	18	3.5	3.7	3.6	3.5	4.1	4.3	4.1	4.3	43M	3.7	3.6	3.86

LONG TERM AVERAGE OF CARROT CULTIVARS - PACKAGING TYPES

Cultivar	Source	# Years Tested	ITA Length cm	ITA Length inches	ITA YIELD t/ha	ITA YIELD b/a	% Mkb	ITA Score
Orlando Gold	Sto	4	23.74	9.35	68.45	1218	85	4.23
Javelin 80	ARCO	4	23.60	9.29	55.75	991	85	4.13
Spartan North	Cro	7	23.25	9.15	66.95	1192	85	4.20
Candy Pak	Cro	9	23.06	9.08	67.48	1201	86	4.27
Spartan Delite 80	MSU	4	22.88	9.01	75.25	1376	89	4.08
Dagger 78	ARCO	7	22.78	8.98	69.67	1240	84	4.24
Cultasa	ARCO	6	22.58	8.89	67.57	1203	81	4.02
Saber 78	ARCO	5	22.48	8.85	61.32	1091	85	4.10
Six Pak	HM	6	22.38	8.82	73.40	1307	89	4.18
Debut	Asg	2	22.08	8.69	72.30	1287	82	3.91
Orange Sherbet	Sto	6	22.05	8.69	65.85	1172	86	3.81
Nuggeteer	FM	7	22.05	8.68	65.00	1158	80	3.91
Spartan Fancy 80	Cro	4	22.00	8.66	68.50	1219	84	4.01
Sweet-n-crisp	Cro	4	21.82	8.60	69.68	1240	86	3.92
Cimarron	HM	2	21.75	8.56	72.00	1282	87	3.89
Flavor Pak	Cro	4	21.73	8.56	73.43	1307	89	3.97
Imperator 58	Cro	9	21.69	8.54	50.34	896	78	3.64
Brite Pak	A&C	5	21.64	8.53	67.12	1195	81	3.89
Trophy	HM	10	21.60	8.50	64.02	1140	84	3.99
Gold Pak 263	Asg	6	21.58	8.50	60.67	1079	85	3.91
Golden State	A.Ch.	2	21.55	8.48	61.00	1077	80	4.13
Aristo Pak	Cro	3	21.40	8.43	75.00	1335	89	3.84
Lance	ARCO	6	21.22	8.35	64.98	1156	83	4.08
Spartan Premium 80	Cro	4	21.20	8.35	80.75	1437	86	3.95

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LONG TERM AVERAGE OF CARROT CULTIVARS - PACKAGING TYPES - continued

Cultivar	Source	# Years Tested	LTA Length cm. inches	LTA YIELD t/ha b/a	% Mkb	LTA Score
Pak Mor	HM	4	21.27	65.00	83	3.81
Diplomat	Asg	5	21.24	73.20	87	3.96
Grenadier	HM	14	21.11	65.94	84	3.98
Spartan Winner 80	Cro	3	21.10	73.33	82	3.78
Chancellor	Asg	5	21.10	68.00	81	3.87
Six Pak II	HM	3	21.07	75.67	89	4.10
Goldmine	Sun	2	21.00	67.00	86	3.67
Sierra	Agri	4	20.96	67.43	84	3.92
Canuck	Sto	15	20.94	62.69	82	3.99
Gold Pak 28	FM	12	20.76	55.91	85	3.84
Paramount	Asg	7	20.55	82.14	85	3.89
Spartan Sweet 'A'	Cro	13	20.33	69.68	82	4.12
Dart	ARCO	2	20.30	70.00	78	3.80
King Imperator	NK	10	20.19	52.71	83	3.75
Spartan Deluxe	MSU	9	19.96	70.80	84	3.97
Dominator	Sun	13	19.74	63.88	85	3.85
Klondike Nantes	Sto	10	19.59	72.10	85	3.87
Hipak	HM	13	19.26	65.46	86	3.84
A Plus	Asg	2	19.00	54.00	65	4.08
Spartan Classic 80	Cro	3	17.93	63.33	78	3.78
Pioneer	HM	10	16.60	64.00	81	3.61
Scarlet Nantes	Asg	8	14.50	66.00	75	3.46

5 - Most desirable Listed in Order of Length

CARROT CULTIVAR STORAGE TRIAL 1984/85 - PACKAGING

Cultivar	Source	% Marketable	% Weight Loss In Storage	% Decay	Degree of Decay*
A Plus (VNH 425)	Asg	84.0	14.6	1.4	4.3
Fancy Pak	Agri	83.7	10.2	6.1	2.0
Golden State	Asg	82.5	12.4	5.1	2.3
Cellobunch	Asg	81.3	12.3	6.4	1.3
Debut	Asg	81.0	13.3	5.7	1.7
Candy Pak	Cro	80.5	12.5	7.0	1.3
Dagger 78	ARCO	78.5	14.7	6.8	1.7
Dominator	Sun	77.9	13.1	9.0	1.3
Flavor Pak	Cro	77.8	12.7	9.5	1.7
Charger	HM	76.8	9.9	13.3	1.3
Orlando Gold	Sto	76.6	17.6	5.8	1.3
Sweet'N Crisp	Cro	76.6	15.3	8.1	1.7
Sierra	Agri	75.9	11.7	12.4	2.3
Saber 78	ARCO	75.8	13.5	10.7	1.3
Dart	ARCO	75.5	15.0	10.0	2.0
Aristo Pak	Cro	74.9	14.0	11.1	1.3
Six Pak	HM	74.9	12.6	12.5	2.0
Six Pak II	HM	74.5	15.0	10.5	1.3
Cimarron	HM	73.3	17.9	8.8	2.0
Pak Mor	HM	72.9	13.1	14.0	1.3
Polaris	HM	72.1	11.9	16.0	1.3
Goldmine	PES	71.9	13.2	14.9	1.3
Top Pak	HM	71.1	16.0	12.9	1.3
Orange Sherbet	Sto	68.4	14.8	16.8	1.0

* 5 = Most Desirable

Harvested October 11, 1985, placed in Filacell Storage
Judged July 5, 1985

Total Storage period - 38 weeks
Listed in order of % Marketable

LONG TERM AVERAGE - CARROT CULTIVAR STORAGE TRIAL - PACKAGING 1985

Cultivar	Source	# Years Tested	% Marketable	% Weight Loss In Storage	% Decay	Degree of Decay
Spartan Classic 80	Sto	4	90.8	6.8	2.4	3.5
Spartan Delux	Cro	4	88.5	8.0	3.5	3.8
Trophy	HM	5	88.2	9.0	2.8	3.8
King Imperator	Sto	3	88.0	7.3	4.7	3.7
Canuck	Sto	6	87.0	8.6	4.4	4.5
Spartan Fancy 80	Asg	3	87.0	9.7	3.3	3.5
Gold Pak 28	Sto	3	86.7	10.0	3.3	4.2
Hipak	HM	4	86.2	9.3	4.5	4.1
Spartan Sweet 'A'	Cro	4	86.1	7.6	6.3	3.5
Spartan North 'A'	Cro	5	85.8	9.4	4.8	3.6
Spartan Fancy	Sto	3	85.7	9.3	5.0	3.8
Klondike Nantes	Sto	4	85.6	8.1	6.3	3.7
Candy Pak	Cro	7	85.5	10.7	4.2	3.0
Orange Sherbet	Sto	3	85.0	10.0	5.0	3.4
Lance	Sto	4	84.8	8.5	6.7	2.9
Grenadier	HM	5	84.6	8.8	6.6	3.6
Cutlass	ARCO	4	84.3	9.3	6.4	3.5
Goldpak 263	Asg	4	83.9	9.0	7.1	3.7
Dominator	Sun	4	83.5	9.3	7.3	3.1
Spartan Delite 80	Asg	3	83.3	11.0	5.7	3.5
Saber 78	ARCO	4	81.4	10.8	7.7	3.1
Dagger 78	ARCO	4	81.4	12.7	6.0	3.7
Six Pak	HM	4	79.3	13.1	7.6	3.5
Pak Mor	HM	4	78.5	11.5	10.0	3.1
Chancellor	Asg	4	77.1	12.2	10.7	2.0

* 5 = Most desirable Storage period was usually 9 months

Listed in order of % Marketable

CARROT ADAPTATION TRIAL - 1985 PACKAGING TYPES

Cultivar	Source	Stand/Meter	Type	Roots		Uniform		Resistance to Greening	Colour		Core Size	Score	% Horizontal Lesions & Degree	Rusty Root	Blight	Slicer
				Length (cm)	Width (cm)	Shape	Size		Internal	External						
Vicasweet 500 tm	A&C	39	N	16	3.3	4	4-	4	4-	4+	4	3.77	100L	4	4	4+
Goldpak 28C	A.Ch.	43	G	19	3.6	3	4-	4-	4-	4-	4-	3.50	75L	5	4	3
Orlando Gold	A.Ch.	45	IG	20	3.2	4	4-	4-	4	4+	4+	4.04	60L	5	5	3
Chrisna	A.Ch.	40	NG	18	3.4	4-	4-	4	3+	4	4	3.77	80L	4	5	4
Apache	ARCO	30	GLD	19	3.6	4	4+	4	4-	4+	4-	3.91	75L	2	5	3-
Seminole	ARCO	34	G	21	3.5	4-	4	4-	4	4+	4-	3.87	100L	4	5	3+
Orlando Gold	ARCO	37	IG	22	3.3	4	4-	4	5-	5-	4-	4.21	85L	4	5	3-
Spartan Delux 80	Asg	41	LDG	17	3.7	3+	3+	4	4	4	4+	3.74	75L	4	4	3-
Spartan Fancy 80	Asg	41	GI	22	3.4	4-	4-	4-	4+	4+	4	4.00	75L	-	-	3-
A Plus	Asg	41	GN	17	3.5	4	4	4-	4+	5-	4-	4.10	70M	3	3	4-
Golden State	Cro	47	GI	22	3.2	4-	4-	4-	5-	5-	4+	4.16	70L	2	3	3-
Imperial	Cro	35	GI	22	3.3	4-	4-	3+	4+	4	4	3.86	100L	2	4	3-
Orlando Gold	Cro	32	IG	22	3.4	4-	4	4	4+	5-	4	4.14	60L	5	4	3
Spartan Fancy '80	Cro	39	GI	22	3.3	4+	4+	4+	4+	4	4	4.21	95L	5	3	2+
Spartan Premium '80	Cro	43	G	20	3.4	4-	4-	3+	4	4	4	3.81	90L	2	4	3
Candy Pak	FM	39	GI	20	3.2	4-	4-	4-	4+	5-	4+	4.16	60L	4	5	3+
Six Pence	HM	31	GI	21	3.4	4	4-	4-	4-	4+	4-	3.91	90L	3	4	3-
Sprinter	HM	35	GI	23	3.7	4+	4	4	4	4	4	3.94	90L	4	4	3
Orlando Gold	JHK	45	IG	23	3.0	4+	4-	4	5-	5-	4	4.34	70L	3	4	3+
Spartan Fancy '80	JHK	32	GI	22	3.3	4+	4	4	4+	5-	4+	4.33	70L	4	4	3-

Note See Main Trial for explanation

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CARROT ADAPTATION TRIAL - 1985 PACKAGING TYPES - continued

Cultivar	Source	Stand/Meter	Type	Roots		Uniform		Resistance to Greening	Colour		Core Size	Score	% Horizontal Lesion & Degree	Rusty Root	Blight	Slicer
				Length (cm)	Width (cm)	Shape	Size		Internal	External						
Gold Strike	NK	39	GLD	21	3.6	4-	4-	3	4	4	4	3.73	90L	4	3	3-
Sundance	NK	29	GI	21	3.4	4-	4	4+	5-	5-	4	4.20	65L	4	3	3-
Goldini	NZ	28	G	19	3.6	4	4-	4-	4+	4+	4-	4.00	80L	4	3	3
Rumba	NZ	29	GD	16	3.9	4	4-	4+	5-	4+	4	4.10	100L	3	4	3+
Canada Super X	PES	37	G	20	3.6	4-	4-	3+	4	4+	4	3.86	50L	5	4	3-
Good Pak	PES	43	GI	20	3.0	4-	4-	4+	3+	4	4	3.81	80L	2	4	4-
Verca	PES	34	NG	17	3.4	4-	4	3+	4	4	3+	3.66	100M	4	4	4-
Isia	PETO	43	NG	17	4.1	4-	4-	3-	4+	4+	4-	3.67	100M	3	5	4-
Nantes Coreless	PETO	41	ND	16	3.9	4	4	3	4-	4	4-	3.73	80H	4	4	4
Touchon	PETO	39	ND	16	4.0	4-	4	3	3+	4	4	3.67	90M	3	5	4-
Nantes Tall Top	PETO	31	ND	16	4.1	4	3+	3-	3	4-	4-	3.39	80H	3	4	4
Nantes Scarlet	PETO	35	ND	16	4.0	4-	4-	3	3+	4+	4-	3.63	100M	4	4	4
Nantes Half Long	PETO	35	NG	17	4.1	4	4-	3	4-	4	4	3.73	80M	4	4	4-
Nantes PW. Improved	PETO	34	ND	14	4.1	4	4-	3+	3+	4-	4	3.57	80H	3	4	4
Orlando Gold	PETO	38	GI	20	3.3	4+	3+	5	4	4	4	4.04	75L	4	5	3
Hytap	SG	36	N	18	3.7	4-	3+	2+	4	4-	4	3.47	80M	1	5	4
Nanthya	SG	27	N	19	4.1	4-	3+	3	4-	4+	3	3.43	80M	3	5	4+
Spartan Premium	Sto	30	GN	18	3.6	4-	4-	4	4-	4	4	3.83	90L	4	5	3
King Imperator	Sto	27	I	22	3.3	4	4-	4-	3+	4+	4-	3.77	60L	4	5	4
Klondike Nantes	Sto	24	GN	19	3.7	3+	4-	3+	4+	4+	4	3.80	80M	4	5	4-
Spartan North	Sto	36	GI	20	3.3	4	4-	4+	4+	4	4	4.00	75L	4	4	-
Spartan Fancy	Sto	29	GI	19	3.5	5-	4	5-	4	4	4	4.20	95L	5	4	3-
Dominator	Sun	40	GLD	21	3.7	4-	4-	4-	4	4-	3+	3.69	100L	4	5	3-

CARROT CULTIVAR TRIAL - PROCESSING TYPES

Management Procedures:

Fertilizer: 700 kg/ha 7-7-25 + 10 kg/a Borax was worked in deeply with a rotovator. Seeding was done on May 7 with a V Belt seeder equipped with a 5 cm wide scatter shoe, in rows 50 cm apart, at 45 to 53 seeds/m depending on germination. The severe thunderstorm that accompanied the tornado on May 31 flooded the plots when 19.4 mm of rain fell in a few minutes time, resulting in a loss of plantstand.

In order to establish tolerance to leafblights, no fungicides were applied after Sept. 1st.

Harvested Oct. 15. Data taken on Nov. 19 for Main Trial and on Jan 9 for Adaptation Trials.

The Main Trial was replicated three times.

Evaluation

The cultivars in the Main Trial are ranked in order of colour marks received.

Yield: 56 t/ha = 25 t/a = 1000 bushels/a.

5 = most desirable

Crownshape: a hollow crown receives a lower mark

Score: The average of the 10 preceding marks

X Horizontal lesions and cavity spots: 38 VI. means that 38 percent of the roots have a few, very small lesions. 73VH means that 73 percent of the roots have very many, very large cavity spots, making the roots unmarketable.

M = medium. The presence of H.L. and/or cavity spots was much more severe than in previous years.

Rusty Root: This disorder attacked the cultivars with lower tolerance, more severely than in former years.

Slicer Types: Cultivars with a perfect cylindrical shape of root receives a mark of 5.

CARROT CULTIVAR MAIN TRIAL, - 1985 - PROCESSING TYPES

Cultivar	Source	Mkb. t/ha	Wt/root (g)	% Mkb.	Roots		Colour							Score	% Horizontal Lesions & Degree	Rusty Root	Blight			
					Length (cm)	Width (cm)	Uniformity	Smoothness	Crown Shape	Core Size	Green Shoulders	External	Cortex					Camb. Zone	Core	Uniformity
Xph 875	Asg	89	227	83	22	4.9	4.1	3.8	3.6	3.9	3.8	4.3	4.6	4.0	4.6	4.1	4.08	57L	5.0	3.3
Processor II	Sto	85	259	83	17	5.8	3.6	3.9	3.3	3.4	3.7	4.4	4.3	4.2	4.3	4.4	3.97	81L	5.0	4.3
A & C 126	A&C	86	233	90	21	5.3	3.9	3.7	3.4	4.1	3.7	4.3	4.6	4.1	4.3	4.3	4.04	88L	4.7	3.3
Camden	Sto	100	231	92	18	5.6	3.6	4.0	3.3	3.2	3.8	4.0	4.3	4.2	4.2	4.4	3.90	83L	5.0	4.3
Danvers Gold	A.Ch.	75	274	82	19	5.4	3.5	3.7	3.3	3.8	3.7	4.2	4.3	4.1	4.2	4.2	3.90	78L	5.0	3.3
Chantal 762 **	SG	56	234	65	18	5.8	3.7	3.8	3.7	3.3	2.9	4.3	4.4	3.9	4.0	4.1	3.82	85M	4.7	4.3
Dess Dan	Sto	78	214	85	20	4.9	3.9	3.7	3.3	3.8	3.7	4.2	4.3	3.8	4.3	4.0	3.89	70L	5.0	3.7
Spartan Bonus 80	Asg	78	235	78	20	5.5	3.9	4.0	3.5	3.7	3.8	4.2	4.1	3.8	4.2	4.0	3.92	60L	5.0	3.7
Comet*	NZ	44	227	52	14	5.6	4.0	4.0	3.6	3.3	3.6	4.0	4.2	4.0	4.0	4.1	3.88	82M	4.7	3.7
XPH 985	Asg	80	246	84	21	5.3	3.7	3.7	3.3	3.6	3.6	4.2	4.4	3.4	4.1	3.9	3.79	91L	5.0	3.7
Chantenay Royal	PETO	79	225	80	15	5.8	3.8	3.7	3.2	3.4	2.9	4.5	4.4	3.5	4.1	3.7	3.72	78H	3.0	3.7
Prechant	NZ	78	269	86	19	5.7	4.0	3.9	3.5	3.7	3.1	4.0	4.2	3.9	4.1	3.9	3.82	68M	5.0	4.0
Chantenay Red Cor.	A.Ch.	91	245	90	15	6.0	3.7	3.7	3.3	2.9	3.4	4.0	4.0	3.7	3.9	3.8	3.63	69M	3.0	3.7
Danvers 126	A.Ch.	75	241	81	19	5.7	3.3	3.6	3.2	2.9	3.6	4.2	4.1	3.3	3.9	3.6	3.57	73M	4.3	4.0
D. Half Long	PETO	75	207	88	18	5.2	3.6	3.6	3.9	3.0	3.8	4.1	4.1	3.5	3.7	3.3	3.65	83L	3.0	4.3
Chanton **	ARCO	61	329	67	18	6.4	3.4	3.0	3.3	3.4	2.9	4.2	4.1	3.1	4.0	3.7	3.52	82M	4.0	3.7
Giant 114	PES	76	272	81	20	5.1	3.7	3.3	3.9	2.8	2.7	4.0	4.1	3.8	3.7	3.7	3.56	80M	3.0	4.0

* only 8 plants/m

** 10 plants/m

LONG TERM AVERAGE OF CARROT CULTIVARS - PROCESSING TYPE

Cultivar	Source	# Years Tested	LTA YIELD		LTA* Colour	LTA* Score
			t/ha	t/a		
Processor II	Sto	2	88.5	39.5	4.28	3.95
Berlicum Bierma	NZ	3	64.0	28.7	4.23	3.84
Spartan Bonus 80	Asg	6	69.8	31.1	4.17	4.00
Dess Dan	Sto	10	76.9	34.3	4.15	3.99
Danvers Gold	A.Ch.	2	73.4	32.7	4.12	3.88
Camden	Sto	2	93.2	41.6	4.12	3.87
Triple Gold	Jung	4	58.0	25.9	4.11	3.98
Tahoe	Agri	3	73.7	32.9	4.10	3.98
XPH 875	Asg	3	80.4	35.9	4.10	3.90
Spartan Bonus	Sto	11	75.0	33.5	4.08	3.94
A&C 126	A&C	2	75.5	33.7	4.07	3.96
Casey	Asg	4	66.0	29.3	4.05	3.97
Spartan Delux	Jung	6	69.0	30.8	4.00	3.92
Lucky's Gold	Glo	4	52.9	23.6	3.99	4.20
Spartan Winner	Jung	8	65.0	29.0	3.98	3.89
Midas Touch	FM	7	64.4	28.8	3.95	3.90
All Season Cross	Tak	4	76.0	34.2	3.95	3.84
XPH 985	Asg	3	79.7	35.6	3.95	3.77

.../ continued

LONG TERM AVERAGE OF CARROT CULTIVARS - PROCESSING TYPE - continued

Cultivar	Source	# Years Tested	LTA YIELD		LTA* Colour	LTA* Score
			t/ha	t/a		
King Midas	FM	6	61.4	27.4	3.94	3.83
Can-Pak	ARCO	6	66.3	29.6	3.90	3.81
Giant 114	PES	2	85.5	38.1	3.90	3.60
Spartan Classic	Cro	9	78.7	35.1	3.88	3.86
Ch. Red Cored	A.Ch.	6	71.5	31.9	3.88	3.70
Royal Danvers	Agw	4	70.0	31.2	3.86	3.84
Berlicum Berlinda	Asm	3	72.0	32.1	3.84	3.62
Spartan Premium	Cro	7	70.6	31.5	3.83	3.79
Oranza	BEJO	3	74.0	33.0	3.82	3.66
Danvers 126	Asg	10	64.4	28.7	3.78	3.65
Royal Chantenay	Sto	2	74.0	33.0	3.74	3.66
Gold King	NK	4	71.0	31.6	3.71	3.56
Chanton	ARCO	2	79.8	35.6	3.71	3.54
Red Core Chantenay	Asg	8	71.9	32.1	3.65	3.55

* 5 = Most desirable

Listed in order of colour

CARROT CULTIVAR STORAGE TRIAL, 1984/85 - PROCESSING

Cultivar	Source	% Marketable	% Weight Loss In Storage	% Decay	Degree of Decay*
Dess Dan	ARCO	84	9	7	3.4
Spartan Bonus '80	Asg	84	10	6	2.8
Danvers Gold	SS	84	9	7	3.5
Camden	Sto	83	9	8	3.5
XPH 985	Asg	81	9	10	3.4
Midas Touch	FM	81	10	9	3.0
Touche	ARCO	80	10	10	3.1
Chanton	ARCO	80	10	10	3.0
XPH 875	Asg	80	11	9	3.0
Casey	Asg	79	8	13	3.4
Processor II	Sto	78	10	12	2.8
XPH 886	Asg	77	10	13	2.7
Spartan Bonus	Sto	76	9	15	2.5
King Midas	FM	75	9	16	3.0
Tahoe	Agri	63	12	25	3.0
Bonanza	NK	59	12	29	2.3

* 5 = Most Desirable

Harvested October 22, 1984, placed in Filacell Storage

Judged June 11, 1985

Total storage period - 34 weeks

Listed in order of % Marketable

CARROT CULTIVAR ADAPTATION TRIAL - 1985 - PROCESSING TYPES

Cultivar	Source	Roots		Colour							Score	Rusty Root	% Horizontal Lesions & Degree	Blight	Slicer
		Length (cm)	Width (cm)	Uniformity	Smoothness	Crown Shape	Core Size	Green Shoulders	External	Cortex	Camb. Zone	Core	Uniformity		
ACX 305, 122	A.Ch.	230	21.8	4.7	5-	3	4	4-	4+	4+	5-	4+	4+	5	4
ACX 405, 165	A.Ch.	209	23.7	4.7	4-	4-	4	4+	5-	5-	5-	5-	5-	4	4-
85 V06	A.A.	257	21.5	5.3	4	3+	4-	3	4+	4	4	4	4+	5	3+
Arco 191	ARCO	224	20.3	5.4	4	3+	4	3-	4+	4+	4+	4+	5-	5	3
Arco 196	ARCO	280	19.0	6.2	4-	3+	4-	3	4-	4	4-	4-	4-	4	2
Arco 210	ARCO	243	21.4	5.0	4-	4-	4-	3	4+	4+	4	4+	4+	5	4-
Arco 211	ARCO	225	19.3	4.9	4-	4-	4	4-	4+	5-	4	4+	4	5	2
80W105	Cro	342	24.0	5.9	4	4-	4-	3-	5-	5-	4+	4+	5-	5	3
81W99	Cro	221	20.3	5.3	4+	4-	4	3	4+	4+	4	4+	4+	5	3-
82W30	Cro	260	22.7	5.0	4-	4-	4-	4-	4+	4+	4	4+	4+	4	3+
82W61	Cro	284	19.1	6.0	4-	4-	4	3-	4	4	3	4-	3+	4	3-
82W69	Cro	290	19.3	6.2	4	3+	4	3-	4	4	3	4-	3+	4	2
Mark II (FMX 105)	FM	363	17.6	6.9	4-	4-	4-	3+	4	4	4-	4	4	4	4
FMX 207	FM	226	14.5	6.0	4+	3	4	3+	4	4	4-	4	4	4	2.
FMX 209	FM	277	17.6	6.7	4	3+	4-	3+	4+	4+	3+	4+	4-	4	2
FMX 277	FM	361	17.2	7.2	3+	4	4-	4-	4+	4+	4-	4+	4-	4	2
EXP 2023	HM	260	19.6	5.9	4-	4-	4-	3-	4	4+	4-	4	4	4	2
Flamant	NZ	240	23.3	5.0	4	4-	4-	3+	5-	5-	5-	4+	4+	3	3+
Flandria	NZ	331	20.7	5.8	4+	4	3+	3-	5-	4+	4+	4	4	4	3
Flarino	NZ	235	16.5	5.4	4	4-	4-	3+	4+	4	4-	4	4-	4	3

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CARROT CULTIVAR ADAPTATION TRIAL. - 1985 - PROCESSING TYPES - continued

Cultivar	Source	Roots		Colour										Horizontal Lesions			
		Length (cm)	Width (cm)	Uniformity	Smoothness	Crown Shape	Core Size	Green Shoulders	External	Cortex	Camb. Zone	Core	Uniformity	Score	Rusty Root	%	& Degree
VK 222	PES	21.3	5.0	4	3+	4-	4-	2+	4+	4+	4-	4+	4-	3.73	4	100VI,	4
VK 747	PES	23.1	5.4	4+	4-	4-	3+	3-	4	4	4	4	4	3.77	4	70I,	4
L 1011	PES	19.3	4.8	4	3+	4	4-	3+	5-	5-	4	4+	4+	4.03	3	100I,	4
GT 26	PES	16.2	6.0	4-	4-	3+	4-	2	4	4	4	4+	4-	3.64	4	90M	3
Chantenay Long Type	PETO	15.2	5.0	3+	4-	4-	4-	2+	4	4-	3-	4-	4-	3.45	3	90VI,	4
Kuroda	PETO	18.8	5.5	3+	3+	3+	4-	2+	4	4	4-	4	4	3.56	2	100M	4
PSR 8184	PETO	21.4	5.7	4	4-	4-	4	4-	4+	4-	4+	4+	4-	3.94	5	100VI,	4

* 5 = most desirable

Yield data is not published due to inconsistent plantstands.

For further information see the Main Trial Report.

BEST SLICER TYPE CARROT CULTIVARS IN 1985 TRIALS

Cultivar	Source	Root Length (cm)	Eye Appeal	Green Shoulder	Colour		Core Size	% Horizontal Lesion & Degree	Rusty Root	Blight	Slicer	Score
					Internal	External						
Vitasweet 750	A&C	18	4-	3+	4	4+	4	43M	4+	4-	4-	3.86
Vitasweet 500	A&C	16	4	3-	4-	4+	4	100L	4	4	4+	3.77
Chrisna	A.Ch.	18	4-	4-	3+	4	4	80L	4	5	4	3.77
ACX 305,122	A.Ch.	21	5-	4-	4+	4+	4	70L	5	5	4	4.20
ACX 405,165	A.Ch.	23	4	4+	5-	5-	4	100VL	4	4	4-	4.35
ARCO 210	ARCO	21	4-	4	4+	4+	4-	70L	5	5	4-	3.93
A Plus	Asg	17	4	4+	4+	5-	4-	70M	3	3	4-	4.10
Mark II	FM	18	4-	3+	4	4	4-	69L	5	4	4	3.86
Good Pak	PES	20	4-	4+	3+	4	4	80L	2	4	4-	3.81
Verca	PES	17	4-	3+	4	4	3+	100M	4	4	4-	3.61
VK 222	PES	21	4-	2+	4	4+	4-	100L	4	4	4+	3.73
VK 777	PES	23	4	3-	4	4	3+	70L	4	4	4+	3.77
Isla	PETO	17	4-	3-	4+	4+	4-	100M	3	5	4-	3.67
Nantes Coreless	PETO	16	4	3	4-	4	4-	80H	4	4	4	3.73
Touchon	PETO	16	4-	3	3+	4	4	90M	3	5	4-	3.67
Nantes Tall Top	PETO	16	4-	3-	3	4-	4-	80H	3	4	4	3.39
Nantes Scarlet	PETO	16	4-	3	3+	4+	4-	100M	4	4	4	3.63
Nantes Half Long	PETO	17	4-	3	4-	4	4	80M	4	4	4-	3.73
Nantes PW. Improved	PETO	14	4-	3+	3+	4-	4	80H	3	4	4	3.57
Hytap	S&G	18	3+	2+	4	4-	4	80M	1	5	4	3.47
Nanthena	S&G	19	3+	3	4-	4+	3	80M	3	5	4+	3.43
Klondike N.	Sto	19	4-	3+	4+	4+	4	80M	4	5	4-	3.80

See Main Trial for explanation of marks
Listed in order of Seed Source

CELERY STORAGE CULTIVAR TRIAL. - 1985

At Harvest													After Storage				
Cultivar	Source	Mkb. t/ha	% Trim Loss	Petiole		Total Length cm	Diam. cm	Rib bing	Com pact ness	Boron Def	Qual ity	% MKB Weight	Reason Unmarketable (% by weight)				Qual* ity
				Length cm									Shrink	Stem	Black	Decay	
Summit	Sto	96	44	30	64	8.7	S	3.4	3.7	4.1	63	13	4	9	7	7	3.5
Strain 2-14	A&C	101	49	32	66	8.6	R	4.2	3.6	3.9	63	16	6	10	5	5	3.1
Surepak	Sto	79	54	39	70	7.9	R	4.6	4.4	4.6	58	13	8	12	7	7	2.9
Florida 683	A&C	115	40	29	65	8.9	R	4.1	4.7	4.0	55	14	10	11	6	6	2.9
52-70'K'Strain	Sun	94	46	30	64	8.3	MR	4.0	4.8	3.7	52	14	10	16	7	7	2.9
Florida 683K Strain	Sun	110	45	29	63	9.2	R	3.8	5.0	3.8	50	11	11	15	6	6	3.1
Ventura	Sto	104	49	35	69	8.7	R	3.9	4.7	3.8	49	13	7	17	8	8	2.9
Green Giant	A&C	118	47	30	67	8.9	MR	3.5	4.7	3.6	47	18	1	23	10	10	2.7
Tendercrisp	Sto	85	42	33	60	7.6	S	3.9	4.7	4.9	47	15	6	18	14	14	2.5
Imp. Utah 52-70	Sto	99	49	31	65	8.5	R	4.4	3.6	3.9	46	17	8	21	4	4	2.6

This trial was seeded on May 8 in a greenhouse and planted to the field on June 24 at a row spacing of 43 cm and 20 cm in the row.

On Sept. 11, three replications of 17 stalks each of each cultivar were harvested, weighed, trimmed and placed in open plastic containers.

The celery received a drench treatment with 1 kg Benlate in 1000 l. of water before being placed in storage.

The samples were stored for 82 days at a constant temperature of 1.7°C and a relative humidity over 95%

* 5 = most desirable S = Smooth R = Ribbing M = Medium

Conclusion

The greatest weight losses occurred during the last 2 weeks when decay started and blackstem discoloration developed in the petioles, just outside of the heart. The single biggest loss category was loss of weight due to shrink. In view of the above, it is not advisable to store celery longer than 2 months in conventional refrigerated storage.

The cultivars are listed in order of % marketable weight after storage.

EARLY CELERY CULTIVAR BOLTING - MAIN TRIAL 1985

Cultivar	Source	Trim- med. t/ha	% Trim Loss	Petiole length cm	Total length cm	Diam. cm	Rib bing	Com pact ness	Boron Def.	% Seeder	Tolerance to Bolting
Summit	Sto	143	17	30	62	9	MS	3.3	4.9	43	3.0
Bishop	HM	155	14	31	62	9	M	3.9	5.0	53	2.8
T.U. 52-75 Imp.	FM	135	23	29	62	9	MS	3.6	3.8	50	2.6
Ventura	FM	131	31	35	67	9	R	4.0	5.0	67	2.3
Summit	Sto	133	26	31	62	9	MR	4.1	5.0	70	1.7
Tendercrisp	FM	150	17	31	65	9	R	3.8	3.4	*	*
T.U. 52-70 R. Imp.	FM	137	31	31	60	9	R	3.5	4.9	73	1.7
Deacon	HM	129	24	29	60	9	R	4.0	5.0	83	1.3
Clean Cut	HM	175	25	30	61	9	R	3.9	5.0	83	1.3
Surepak	Sto	156	27	40	72	9	R	4.7	5.0	83	1.0
Strain 2-14	A&C	105	23	32	65	8	R	4.7	5.0	90	1.0
Florida 683	HM	145	7	30	62	10	R	4.2	5.0	97	1.0
Florida 683	Sto	No marketable yield due to seeders									
Tall Green light	HM	147	25	31	61	10	R	3.7	5.0	100	1.0
Green Giant	A&C	204	15	31	59	10	R	3.7	5.0	100	1.0

* Transplanted 6 days later, no night frosts after planting, no seeders developed.

The cultivars Déacon, FM 1217, 52-70 HK, Pilgrim, and Companion have some tolerance to Fusarium Yellow (M.S.U. Research)
 Listed in order of tolerance to bolting

EARLY CELERY CULTIVAR BOLTING - ADAPTATION TRIAL - 1985

Cultivar	Source	Trim- med. t/ha	% Trim Loss	Petiole Length cm	Total Length cm	Diam. cm	Rib bing	Com pact ness	Boron Def.	Seeder %	Tolerance to Bolting
FM 1217	FM	211	20	35	68	10	R	4	5	100	1
77-43	MSU	187	32	36	70	10	R	4	5	30	4-
79-57 **	MSU	175	24	36	64	10	R	4	4+	0	5
Pilgrim **	MSU	168	23	38	73	9	R	4-	3+	0	5
Companion	MSU	No marketable yield due to seeders									
CRY 004 **	HM	181	27	30	61	10	R	3+	4	100	1
CRY 003	HM	170	31	31	66	9	R	4-	5-	*	*

* Transplanted 6 days later, no night frosts after planting and hardly no seedstalk development took place.

** These cultivars developed longitudinal splitting on the outside of some of the older petioles, extending upwards for up to 20 cm.

Management Procedures:

Seeded March 6, transplanted to flats April 10, placed in a "Filacell" storage at 1.7°C from April 24 to May 3, planted in a muck soil on May 7 at a spacing of 57 cm X 15 cm. On May 8 the minimum night temperature reached a low of 0°C, and on May 9 the night temperature at soil level -3°C for 7 hours. Prior to planting, fertilizer was applied at 800 kg/ha 10-10-30 + 20 kg/ha Borax.

Two times a sidedressing of ammonium nitrate was applied at 100 kg/ha, and two times Solubor was sprayed at 1 kg/ha. In order to better evaluate the seedstalk development, the harvest was delayed for one week to August 14. The Main Trial was replicated three times.

Legend:

5 = Most Desirable

Cultivars with a very high percentage of seeders were evaluated

only when enough plants were free of seedstalks, or if the seedstalks were less than 10 cm high.

Ribbing: R = Ribbing S = Smooth

Diameter: = diameter in cm of trimmed stalks

Boron Deficiency: Includes cracked stems (catscratches) as well as some nodal cracking

Tolerance to Bolting: is based on % seeders, length of seedstalks and effect of bolting on the quality of the plant.

ONION CULTIVAR TRIALS - 1985

Crop Management Information of Trials on Muck Soils:

Fertilizer: 900 kg/ha 10-8-20 + 30 kg/ha copper sulfate.

Seeding: April 29 at 48 to 55 seeds/m depending on the germination. The seed was coated with Pro-Gro and Dyfonate + Thiram was applied at 29 kg/ha in the seed furrow, made by a 5 cm wide scatter shoe.

Weed Control: pre-: 2.5 l/ha Gramoxone
loop: 16 l/ha Radox + 6 l/ha CIPC
The Radox was too high for the abnormal warm weather following application, resulting in slow growth and loss of stand.
post: 5.6 l/ha Radox + 2.8 l/ha Tok applied at the 1,2,4, and 6 leaves stage

Minor Elements: 5 sprays of 2 or 3 kg/ha manganese sulphate, no sidedressing, water table controlled at 60 cm, once irrigated.

Note on Crop Development: The fast spring thaw caused a sudden heavy run-off of water and road salt from Highway #400 overflowed on part of the research plots, resulting in a high salt content of the soil. The area of the Onion Adaptation and Observation Trials was severely affected and no data was taken on these plots.

Explanation of Marks Given:

The Main Trial is listed in order of maturity and is replicated three times.

The date of maturity is the date when at least 85% of the tops are down.

Stand/meter: 33 bulbs/m = 10 bulbs/ft

Yield/ha: The marketable yield over 44mm (1 3/4"). 56 t/ha = 25 t/a = 1000 bags/acre

Weight/bulb: 100 grams = 3.5 oz = bulb 2 1/4" in size

5 = Most desirable

.../continued

CORRECTION:

Norstar 72 wt/bulb (g) should read 111 ONION CULTIVAR MAIN TRIAL - 1985 - continued

Cultivar	Source	Days to Maturity	Stand/Meter	Marketable Yield		b/a	# # 1 Smalls	# Culls	Wt/bulb (g)	Firmness	Uniformity		Colour	Skin Thickness	Skinning	Neck Finish	Score	# Seeders
				t/ha	Yield						Size	Shape						
Eskimo	Sto	107	27	52.0		926	7	1	91	3.8	4.1	4.0	4.1	3.8	3.9	3.1	3.97	0
Norstar	Sto	107	25	63.4		1129	4	2	72	3.4	4.0	3.9	4.0	3.6	3.6	4.1	3.78	0
Tarmagon	Sto	109	28	69.4		1235	2	1	111	4.1	4.1	3.8	4.1	3.5	3.7	4.3	3.93	0
Simcoe	ARCO	112	21	54.9		977	3	6	122	4.0	3.6	3.8	4.2	3.8	3.9	3.8	3.94	4
Aries	Asg	113	28	54.0		961	6	2	91	3.8	4.0	3.7	3.8	3.4	3.8	4.0	3.78	1
Taurus	Asg	113	32	66.7		1187	4	2	96	3.5	3.8	3.9	3.8	3.8	3.8	3.9	3.80	1
Trapp #8	E.J.	113	28	60.2		1072	4	2	97	4.0	4.0	3.9	4.2	4.0	4.0	3.8	3.97	0
Mucker	ARCO	114	29	65.9		1173	5	2	108	4.1	3.7	3.8	4.0	3.7	3.7	4.0	3.85	6
Autumn Glo	Cro	114	28	58.5		1042	6	1	96	3.9	3.5	3.8	3.6	3.8	3.9	3.9	3.76	1
Sweet Sandwich	Asg	115	30	65.6		1167	4	2	98	3.9	3.6	4.1	4.4	3.9	4.0	3.8	3.96	2
Autumn Splendor	JHK	115	36	56.9		1012	11	1	77	3.9	3.6	3.3	3.8	4.0	4.0	4.1	3.82	0
North Star	FM	115	31	40.5		721	14	3	68	3.9	3.2	4.0	4.3	3.9	4.0	4.1	3.89	0
Autumn Keeper	JHK	116	32	53.1		945	8	3	79	4.1	3.3	3.3	3.8	3.9	3.8	3.7	3.70	1
Canada Maple	Sto	116	33	55.6		989	7	3	81	3.9	3.2	3.7	3.6	4.0	4.0	3.6	3.71	4
Progress	HM	117	26	45.5		811	8	3	86	3.6	3.6	3.3	3.8	3.7	3.9	3.5	3.64	1
Buccaneer Imp.	HM	119	27	53.1		908	4	2	90	4.1	3.7	4.0	3.8	3.9	3.9	3.8	3.89	5
ABCO	A&C	119	27	65.1		1159	4	3	111	3.9	3.6	3.9	4.1	3.7	3.9	3.9	3.86	4
Sunglow "A"	Cro	119	27	53.6		954	6	1	90	3.6	3.6	3.7	3.7	3.8	4.1	3.7	3.75	1
Gibraltar	FM	119	32	55.8		993	6	4	83	3.9	3.8	3.9	4.4	3.8	3.7	3.7	3.87	3
Bullet	FM	119	32	75.5		1343	3	2	106	4.0	3.9	3.8	4.0	3.6	3.7	3.9	3.83	3
Autumn Pride	Cro	121	31	69.6		1240	5	2	103	3.8	3.8	3.2	3.6	3.5	3.7	3.6	3.60	4
Cuprum	ARCO	122	30	62.7		1115	5	1	97	3.9	3.7	3.6	4.1	3.7	4.0	3.9	3.83	2
Sentinel	HM	123	27	59.9		1067	3	3	102	4.1	4.0	3.7	4.0	3.7	3.8	3.9	3.87	4
Copra	BEJO	125	33	61.2		1090	4	7	90	4.1	4.1	3.7	3.6	3.9	3.8	3.9	3.87	0
Superior	A&C	126	25	55.4		986	6	6	108	3.6	3.5	3.2	4.0	4.1	4.0	3.4	3.69	0

LONG TERM AVERAGES OF SOME OF THE ONION VARIETIES TESTED IN OUR TRIALS

Cultivar	Source	# Years Tested	I.T.A.		I.T.A. Days	
			T/ha	b/a	Maturity to	Firmness
Eskimo	Tak	3	56.0	1014	106	3.83
Norstar	Tak	3	63.7	1133	107	3.58
Pronto S	Asg	4	48.4	862	107	2.76
Super Spice	Sto	5	37.5	668	107	4.14
Autumn Spice	Cro	9	41.2	773	108	4.17
Columbia	FM	2	56.0	998	109	4.03
Simcoe	ARCO	8	48.6	865	109	4.24
Rocket	Asg	13	54.6	970	109	3.82
Early Pak	Cro	7	52.9	941	110	4.13
Fawn Preview	FM	11	51.2	912	110	4.05
Capable	ARCO	2	55.2	983	110	3.90
Trapp # 6	Tra	12	54.1	962	110	4.01
Garnet	Asg	12	54.1	962	110	3.77
Progress	HM	8	57.5	1024	110	3.70
Mirage	Sto	4	44.2	787	111	4.35
Tamarack	Sto	6	48.8	868	111	4.22
Buccaneer	HM	13	52.0	926	111	4.08
Mustang	HM	12	51.1	910	111	4.05
Aries	Asg	9	52.0	926	111	3.98
Taurus	Asg	9	53.2	947	111	3.88
Nutmeg	HM	10	51.6	919	112	4.29
Trapp #8	Tra	11	56.8	1011	112	4.23
Golden Laker	FM	5	47.4	848	112	4.00
Imp. Autumn Spice	Sto	8	45.8	815	112	3.78

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LONG TERM AVERAGES OF SOME OF THE ONION VARIETIES TESTED IN OUR TRIALS - continued

Cultivar	Source	# Years Tested	LTA		LTA Days to	
			T/ha	b/a	Maturity	Firmness
Sunburst	Asg	8	44.5	792	113	4.00
Abco	A&C	3	64.3	1145	114	4.13
Autumn Gold	Cro	5	54.0	956	114	4.02
Buccaneer Imp.	HM	3	60.1	1070	114	4.37
Mucker	ARCO	8	55.6	990	114	4.05
Cooper Cache	FM	9	53.7	956	114	3.92
Sunglow	Cro	4	51.3	909	114	3.86
Sweet Sandwich	PETO	4	69.3	1233	115	3.97
Autumn Bronze	FM	2	40.0	713	115	4.00
Autumn Splendor	JHK	4	53.6	954	115	4.06
Ontario M	Asg	7	54.7	970	116	4.11
Coppermine	FM	2	61.9	1100	116	3.78
Canada Maple	Sto	15	56.0	996	117	4.23
Autumn Keeper	JHK	7	53.9	958	117	4.13
Spartan Era	Sun	7	55.5	987	117	4.13
Storage King	Sto	8	53.9	960	117	3.90
Gladitor	Sun	10	61.5	1094	117	3.76
Exporter	Sto	14	57.9	1030	117	3.76
Bronze Age	FM	6	60.8	1082	117	3.38
Spartan Sleeper	USDA	4	61.4	1093	118	4.11
Russet	Sto	6	66.1	1177	118	3.83
Autumn Pride	Cro	4	72.2	1285	119	3.73
Sentinel	HM	11	59.4	1057	120	4.25
Harvestmore	HM	2	39.4	701	120	3.50

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LONG TERM AVERAGES OF SOME OF THE ONION VARIETIES TESTED IN OUR TRIALS - continued

Cultivar	Source	# Years Tested	I.T.A.		I.T.A Days		Firmness
			T/ha	b/a	Maturity	to	
Canada Granite	Sto	5	45.1	803	121	121	4.04
Cuprum	ARCO	2	64.8	1151	121	121	4.14
Northern Oak	Sto	8	61.0	1085	121	121	3.80
Gibraltar	FM	2	59.7	1063	122	122	4.25
Surecrop	HM	4	60.7	1081	124	124	4.23
Spartan Banner 80	Agw	2	67.8	1207	125	125	3.78
Better Banner	A&C	2	59.2	1052	125	125	3.84
Super Sleeper	HM	3	59.6	1060	126	126	4.20

Listed in order of Days to Maturity

ONION CULTIVAR STORAGE TRIAL - SEPTEMBER 25/84 TO AUGUST 13/85

Cultivar	Source	% Weight Loss	% Rot	% Sprouts	% Soft	% Marketable	Firmness*
XPH 3288	Asg	11	0	2	0	87	3.8
Canada Maple	Sto	11	0	4	0	85	4.3
Super Sleeper	HM	12	1	2	1	84	4.1
Buccaneer Imp.	HM	11	1	5	0	83	4.3
XPH 3318	Asg	11	0	5	1	83	4.1
Gibraltar	FM	11	1	4	1	83	4.0
Autumn Keeper	JHK	10	1	7	0	82	3.9
Downing Yellow Globe	Kru	15	1	1	1	82	3.8
ABCO	A&C	10	2	6	1	81	3.7
Cuprum	ARCO	10	1	9	1	79	3.8
Surecrop	HM	12	1	7	1	79	3.8
Autumn Splendor	JHK	10	1	9	3	77	3.8
Sentinel	HM	11	0	13	1	75	4.0
Copper Mine	FM	10	2	10	3	75	3.4
Better Banner	A&C	11	1	12	1	75	3.3
Sweet Sandwich	PETO	12	2	10	2	74	3.6
Columbia	FM	10	1	13	2	73	3.8
Early Pak	Cro	12	1	14	1	72	2.7
Tamarack	Sto	11	0	15	3	71	3.7
Capable	ARCO	10	1	15	3	71	3.7

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ONION CULTIVAR STORAGE TRIAL. - SEPTEMBER 25/84 TO AUGUST 13/85 - continued

Cultivar	Source	% Weight Loss	% Rot	% Sprouts	% Soft	% Marketable	Firmness*
Autumn Glo	Cro	12	1	16	3	68	3.8
North Star	FM	12	1	21	2	65	3.8
Russet	Sto	12	1	15	15	57	3.0
Eskimo	Tak	11	1	31	4	53	3.1
Norstar	Sto	10	1	32	12	45	2.9
Averages		11	1	11	3	74	3.7

*** 5 = Most desirable Listed in order of % Marketable**

On August 8, 1984 in the late afternoon, MH-30 was applied at 8.4 l/ha in 550 l water/ha. Of the early maturing cultivars, more than 50% of the tops were down and of the very late maturing cultivars, slightly less than 50% of the tops were down. The bulbs were pulled on Sept. 14 and the tops were removed on September 25. The samples were placed in a forced air and temperature controlled storage at 24°C and a relative humidity of 75%. The temperature was gradually lowered until it reached 10°C by the end of December. On August 13, 1985 data was taken.

LONG TERM AVERAGES ONION CULTIVAR STORAGE TRIALS

Cultivar	Source	# Years Tested	% Weight Loss in Storage	% Rot, Soft & Sprouts by Weight	% Marketable by Weight	* Firmness
Simcoe	ARCO	3	7.0	6.3	86.7	4.17
Canada Maple	Sto	7	7.9	8.6	83.5	4.24
Buccaneer Imp.	HM	4	8.8	8.5	82.7	4.20
Taurus	Asg	6	6.7	11.1	82.2	3.72
Exporter	Sto	3	8.7	9.2	82.1	3.63
Sentinel	HM	7	9.7	9.6	80.7	4.19
Mucker	ARCO	5	8.0	11.8	80.2	3.86
Trapp # 8	Tra	6	8.3	11.6	80.1	4.00
Copper Cache	FM	5	8.9	11.8	79.3	3.98
Fawn Preview	FM	6	8.3	12.6	79.1	4.17
Storage King	Sto	4	8.8	12.7	78.5	3.93
Autum Pride	EJ	3	8.0	14.7	77.3	3.33
Trapp # 6	Tra	5	8.6	14.3	77.1	4.02
Rocket	Asg	5	8.0	17.5	74.5	3.96
Tamarack	Sto	4	9.0	16.7	74.3	3.83
Mustang	HM	4	8.8	17.4	73.8	3.95
Autumn Keeper	Cro	4	9.3	17.2	73.5	3.90
Aries	Asg	5	8.0	18.8	73.2	3.54
Nutmeg	HM	4	8.0	21.1	70.9	4.03
Autumn Splendor	Cro	5	8.8	20.6	70.6	3.96
Garnet	Asg	5	8.0	21.4	70.6	3.34
Ontario M	Asg	5	7.8	21.9	70.3	3.70
Early Pak	Cro	5	9.6	24.2	66.2	3.72
Progress	HM	6	8.2	29.1	62.7	2.87
Autumn Glo	Cro	3	11.3	28.0	60.7	3.87
Russet	Sto	5	9.4	30.0	60.6	3.00

* 5 = Most desirable Storage period usually 11 months

Listed in order of % marketable

ONION CULTIVAR TRIAL ON MINERAL SOIL - 1985

Cultivar	Source	% Down Aug. 22	Stand/Meter	Marketable Yield		% # 1small	% Culls	Weight/bulb (g)	Firmness	Uniformity		Colour	Skin Thickness	Skinning	Neck Finish	Score
				t/ha	b/a					Size	Shape					
Aries	Asg	98	20	43	766	11	1	108	3.5	3.4	3.5	3.2	3.0	3.0	3.3	3.26
Taurus	Asg	88	36	37	666	22	4	62	3.7	3.2	3.5	3.7	3.2	3.5	3.5	3.46
Pronto S	Asg	95	31	48	849	9	2	76	3.5	3.3	3.5	3.0	2.9	2.8	3.3	3.18
Rocket	Asg	93	30	40	707	14	1	68	3.3	3.3	3.7	3.2	3.0	3.3	3.2	3.27
Topaz	Asg	75	26	50	890	6	3	91	3.2	3.3	3.7	3.2	2.9	2.9	3.2	3.16
Simcoe	ARCO	68	17	35	628	6	4	97	4.0	3.5	3.5	3.9	3.3	3.9	3.3	3.61
Sweet Sandwich	Cro	83	31	53	951	9	2	84	3.3	3.3	3.3	3.2	3.2	3.5	3.7	3.34
Trapp #6	E.J.	88	30	46	819	7	2	74	3.7	3.5	3.9	3.5	3.3	3.7	3.5	3.58
Trapp #8	E.J.	78	29	42	747	10	1	72	3.7	3.5	3.7	3.7	3.3	3.3	3.7	3.56
Columbia	FM	95	32	48	849	13	2	76	3.3	3.7	3.5	3.7	3.3	3.3	3.5	3.47
Buccaneer Imp.	HM	78	31	39	686	15	4	67	4.0	3.5	3.7	3.5	3.2	3.2	3.2	3.46
Progress	HM	80	30	36	632	17	2	64	3.0	3.2	3.7	3.0	3.0	3.4	3.2	3.19
Early Pak	JHK	75	31	48	853	9	7	79	3.2	3.5	3.7	3.0	2.9	2.9	3.2	3.17
Super Spice II	Sto	88	25	48	859	4	4	91	3.7	3.2	3.5	3.7	3.2	3.5	3.5	3.46
Norstar	Sto	93	29	55	978	7	2	90	3.0	3.5	3.7	3.0	3.0	3.2	3.7	3.29
Exporter	Sto	85	29	34	605	14	6	64	3.5	3.3	3.5	3.5	3.2	3.5	3.5	3.42

This two times replicated trial was seeded on April 30 in a Granby sandy soil, on raised beds 140 cm wide at the top, with 4 rows per bed, spaced 30 cm apart.

Normal growing practices were followed, irrigation was used two times.

Harvest took place on September 5, after which the bulbs were treated and stored the same way as the Onion Trial on organic soil. Data was taken on December 11.

* 5 = Most Desirable Listed in Order of Seed Source

